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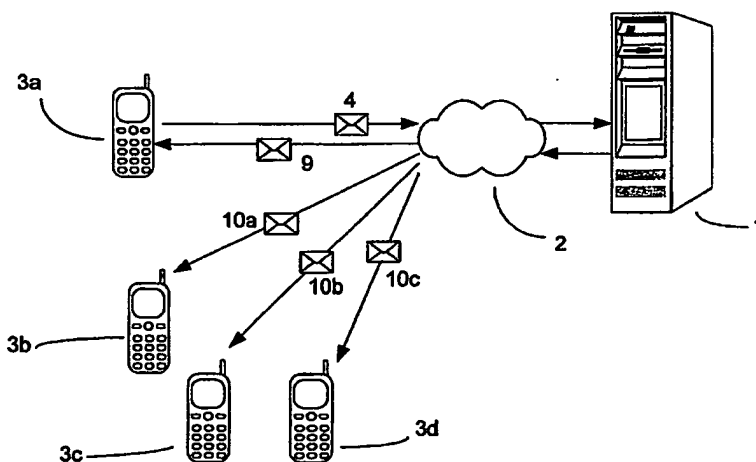
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(54) Title: CONFERENCE CALL FACILITY

(57) Abstract: A conference call is established in response to receiving a request 4 from a first communication terminal 3a. The request 4 preferably is an SMS or MMS and comprises one or more identifiers 5, 6, 7, e.g. telephone numbers, relating to a plurality of other communication terminals 3b-3d. A conference call server I allocates a conference call channel and an associated identifier, such as a telephone number. Messages 10a-10c alerting the conference participants are then sent to the other communication terminals 3a-3c, each message including the identifier associated with the conference call channel. Access to the conference call may be restricted to authorised users by comparing identifiers, such as CLIs, of incoming callers to the identifiers provided in the request 4 and allowing access only if there is a correspondence or match. In the event that an incoming caller has withheld their CLI, or it is otherwise nondeterminable, access is refused and a message may be sent reminding conference participants who have yet to join the conference call not to withhold this information. Alternatively, the server calls the participants at the appropriate time.

Conference Call Facility

Field Of The Invention

The invention relates to the provision of a conference call facility and is particularly

5   suitable for, but not limited to, establishing conference calls between mobile
telephone users via a wireless communication network.

Background Of The Invention

Communication systems often provide conference call facilities, allowing a

10   telephone call to be shared by three or more users. In one known system, a first
user, or host, calls a conference call facility to request a conference, specifying a
date and time for the conference call. A telephone number is then allocated to the
conference and communicated to the host for distribution to the other participants.
At the appointed time, the participants dial the telephone number to join the

15   conference. The participants may also be given a password, so that access to the
conference is restricted to users selected by the host.

EP-A-1164774 discloses a system in which a conference call can be initiated by the
sending of a suitable SMS to a server at a preset telephone number, with invitees

20   being notified by SMSs sent from the server. The conference call can be joined by
the invitees dialling a telephone number included in the body of the SMS
invitations. However, it has been found that it is not necessarily a simple matter for
an invitee to dial into the conference call. Also, it is relatively easy for invitees not
to receive invitation SMSs immediately, which can prevent them joining the

25   conference call or joining it at an appropriate time.

Summary Of The Invention

According to a first aspect of the invention, there is provided a method of
establishing a conference call, comprising: receiving a request at a conference call

30   service provider from a first communication terminal, the request comprising one or
more identifiers relating to a plurality of other communication terminals; and in
response to the request, allocating a conference call channel, associating an
identifier with the conference call channel and sending a message from the

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conference call service provider to said other communication terminals, each message containing the conference call channel identifier as the message originator..

The other communication terminals then receive a message identifying the
5   conference call channel as the originator of the message, e.g. by its telephone number. Using this invention, cost and convenience benefits can be experienced by the user of the first communication terminal. This allows the other communication terminals easy access to the conference call.

10   This may be done by including an identifier, such as the telephone number associated with the conference call channel, in a header of the message so that, where a recipient of the message is equipped with a suitable communication terminal, the recipient can join the conference call using a short-cut defined in the communication terminal, reducing the number of keystrokes necessary for the
15   recipient to access the conference call.

The method may comprise subsequently initiating from the conference call service provider a telephone call to each of said other communication terminals. This is convenient in some circumstances, since it provides increased certainty that all, or
20   most, of the participants will be joined in the conference call at an appropriate time.

Furthermore, the provision of security procedures is facilitated as access to the conference call can be limited to users of communication terminals identified in the request. For example, an identifier, such as a Calling Line Identification (CLI)
25   associated with a communication terminal determined to be attempting to access the conference call channel may be compared with a list of identifiers associated with communication terminals that are allowed access to the conference call, where access is permitted only if the identifier associated with said communication terminal corresponds to an identifier on said list. If the identifier of a
30   communication terminal attempting to access the conference call is withheld or is otherwise non-determinable, a message can be sent to all communication terminals identified in the request that have not yet joined the conference to notify them that access can only be granted if this information is provided.

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Preferably, one or both of the request and the message are in the form of a text message, such as a Short Message Service (SMS) message. This allows the inclusion of further text in the request, for example a short message explaining the subject of
5   the conference call. The text may then be included in the message sent to the participants. If one or both of the request and the message is a multimedia message, image, video and/or audio data can also be used to explain the conference call or matters surrounding it.

10   According to a second aspect of the invention, there is provided apparatus for providing a conference call facility comprising: a receiver for receiving a request from a first communication terminal, said request containing one or more identifiers relating to a plurality of other communication terminals; an allocator for allocating a conference call channel and associating an identifier with the conference call
15   channel in response to the request; and a message generator for preparing and sending a message to said other communication terminals, each message containing an indication that the message originates from the conference call channel.

According to a third aspect of the invention, there is provided a method of
20   restricting access to a conference call channel, comprising: compiling a list of identifiers associated with communication terminals to be joined on a conference call; determining whether an identifier associated with a first communication terminal attempting to access the conference call channel corresponds to an identifier on the list; allowing access to the conference call channel if the identifier
25   of the first communication terminal corresponds to an identifier on said list; and disallowing access to the conference call channel if the identifier of the first communication terminal does not correspond to any of the identifiers on the list wherein, if the identifier of the first communication terminal is withheld or is otherwise non-determinable, a message is sent to all communication terminals
30   associated with identifiers on said list that have not accessed the conference call channel..

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By using an identifier associated with a communication terminal attempting to join the conference call, the provision of access codes or passwords to the conference participants becomes unnecessary, which may result in increased convenience for users and/ or improved security. The identifier is preferably a telephone number,

5   which may be determined from a CLI.

According to a fourth aspect of the invention, there is provided apparatus for restricting access to a conference call channel, comprising: a compiler configured to compile a list of identifiers associated with communication terminals to be joined

10   on a conference call; a determiner configured to determine whether an identifier of a first communication terminal attempting to access the conference call channel corresponds to an identifier on the list; an access grantor configured to allow access to a conference call channel if the identifier of the first communication terminal corresponds to an identifier on said list and to disallow access to the conference call

15   channel if the identifier of the first communication terminal does not correspond to any of the identifiers on the list; and a message generator configured to prepare and send a message to all communication terminals associated with identifiers on the list that are not connected to the conference channel if the identifier of the first communication terminal has been withheld or is otherwise non-determinable

20

The invitation messages do not need to contain the conference call channel identifier as the message originator, since the conference call channel identifier can be communicated instead

25   The invention also provides a communication system comprising any of the above apparatus.

Embodiments of the invention will now be described by way of example only with reference to the following drawings.

30

Brief Description of the Drawings
In the drawings:
Figure 1 shows a communication system according to the present invention;

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Figure 2 shows a request in the form of an SMS message;

Figure 3 is a flowchart showing the establishment of a conference call;

Figure 4 is a flowchart showing the connection of a communication terminal to a
conference call according to a first embodiment of the invention;

5   Figure 5 is a flowchart showing the connection of a communication terminal to a
conference call according to a second embodiment of the invention;

Figure 6 is a block diagram of a conference call facility for use in the
communication system of Figure 1;

Figure 7 is a block diagram of a communication terminal for use in the

10   communication system of Figure 1; and

Figure 8 shows an alternative communication system according to the present
invention.

Description Of The Embodiments

15   A communication system is shown in Figure 1, comprising a conference call server
1 and a network 2, which may comprise plural interconnected networks. The
network 2 comprises at least one Mobile Switching Centre (MSC) and at least one
Short Message Service Centre (SMSC), as well as the other usual components of a
mobile telephone network, none of which are shown.

20

The conference call server 1 provides communication channels for conference calls
between a plurality of communication terminals, which, in this example, are mobile
telephones 3a-3d. The conference call server 1 is arranged such that it is perceived
by the network 2 as a self-contained mobile network with a single Global Title and

25   Point Code.

A user of a communication terminal 3a wishing to set up a conference call makes a
request 4 using a Short Message Service (SMS) message, shown in Figures 1 and 2.
The request 4 contains a list of the telephone numbers 5, 6, 7 of other participants

30   to be invited to take part in the conference call. This list may be followed by
optional text 8, e.g. text identifying the subject of the conference. The optional text
is separated from the list of telephone numbers by a # symbol. The header of the
request 4 includes a field identifying the sender of the message, as is conventional

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with SMS messages. In this case, the field contains the telephone number of the
mobile telephone 3a from which the request 4 was sent.

The request 4 is addressed to a telephone number that has previously been allocated
5   for allowing access to the conference call facility. The request 4 is directed to an
MSC associated with the network 2, where it is acknowledged in a well-known
manner and forwarded to the conference call server 1, since the network 2 perceives
the conference call facility telephone number as belonging to the conference call
server 1.

10

A procedure for preparing a conference call will now be described, with reference to
Figure 3, beginning at step s3.0. The request is received (step s3.1) and checked for
errors. If there are no fatal errors, the request is acted on as follows. The
conference call server 1 reserves a conference call channel and other resources
15   necessary for hosting the conference call (step s3.2). This is achieved using a
database held on the conference call server 1 or on a separate computer (not
shown), selecting a virtual telephone number from a pool of available telephone
numbers and assigning it to the conference call.

20   In a preferred embodiment, the conference call server 1 compiles a list of the
telephone numbers 5, 6, 7 of the conference participants (step s3.3) from the
information provided in the request 4. The conference call server 1 includes in the
list the telephone number of the mobile telephone 4 from which the request 4 was
sent. The list may be subsequently used to help prevent unauthorised access to the
25   conference call.

The conference call server 1 subsequently generates an SMS message for the user of
the communication terminal 3a, confirming that the conference has been created
and notifying the user of the assigned telephone number. To achieve this, a
30   message header is generated (step s3.4), a field in which indicates the source of the
message. This field is set to indicate the telephone number of the conference call
channel as the source of the message. The message body then is provided with the
virtual telephone number assigned to the conference call, along with any optional

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text 8 included in the request 4 (steps s3.5, s3.6, s3.7). The confirmation message is then sent to the mobile telephone 3a that sent the request (step s3.8) and is shown at 9 in Figure 1.

5   The conference call server 1 then generates invitation messages inviting the remaining participants to join the conference call. Headers of these invitation messages are generated such that the field indicating the source of the message contains the telephone number of the conference call channel (step s3.9). Bodies of the invitation messages contain the telephone number of the conference call

10   channel, text indicating that the message is an invitation to join a conference call and any optional text 8 extracted from the request (steps s3.10, s3.11, s3.12). The invitation messages are then sent to the mobile telephones 3b-3d (step s3.13) and are shown at 10a-10c in Figure 1.

15   The confirmation and invitation messages 9, 10a-10c are sent directly from the conference call server 1 to the mobile telephones 3a-3d. If any of the messages are not delivered successfully, the conference call server 1 may make further attempts to send the messages for a limited period.

20   The preparation of the conference call is then complete (step s3.14).

As the headers of the confirmation message 9 and invitation messages 10a-10c show the conference call channel as the sender of the message 9, 10a-10c, a recipient may be able access the conference using a short-cut defined on their mobile telephone

25   3a-3d. For example, many mobile telephones currently available are configured to call the sender of a message if the user presses a "call" button twice when the message is displayed.

A procedure for connecting a caller to a conference call according is shown in

30   Figure 4, beginning at step s4.0. When an incoming call directed to the conference call channel is received (step s4.1), because a caller has dialled the telephone number assigned to the conference call, the conference call server 1 checks whether the conference is full (step s4.2). The conference call is full if the number of

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telephones connected to the conference call channel already exceeds the number of invitation messages 10a-10c sent by the conference call server, to allow for the number of invitees plus the user who sent the request 4, or, where a list of telephone numbers of participants has been compiled (step 3.3), the number of
5   entries in that list. If the conference call is full, the incoming caller is refused access (step s4.3) and an error message is sent to the caller (step s4.4). If the conference call is not full, the caller is connected (step s4.5) and, if required, a welcome message is played to the caller. If the caller is the first to join the conference (step s4.6), a further recorded message is played (step s4.7) asking the caller to wait for
10   other participants to join the conference call.

The connection procedure is then complete (step s4.8). The same procedure is followed in respect of each caller who dials the telephone number assigned to the conference call.
15

When the conference call has been completed and the users have been disconnected, the conference call channel and the virtual telephone number assigned to it are returned to the pool. Any further attempts to send confirmation and/ or invitation messages 9, 10a-10c are stopped at this time.
20

In order to reduce the likelihood that an uninvited caller may dial the assigned virtual telephone number and be connected to the conference call, the number of virtual telephone numbers in the pool may be considerably larger than the number of available conference call channels. Alternative, or additional, security measures
25   may be implemented. For example, the confirmation and alert messages 9, 10a-10c can include passwords or codes that a user must provide in order to access the conference call.

Where a list of the telephone numbers of the conference participants has been
30   compiled (step s3.3), it is possible to use this list and an identifier of a caller dialling the telephone number assigned to the conference call, such as the callers CLI, to determine whether to allow them access to the conference call. An alternative

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procedure for connecting a caller to a conference, including this procedure, is
shown in Figure 5.

Beginning at step s5.0, a call to the conference call channel is received at the
conference call server 1 (step s5.1). The conference call server 1 determines
whether the caller's CLI is available (step s5.2). If so, the conference call server 1
compares the caller's CLI with the telephone numbers on the list (step s5.3). If the
caller's CLI corresponds to one of the telephone numbers listed, the caller is
connected to the conference call (step 5.4). A welcome message may be played to
the caller at this point. If the caller if the first to join the conference (step s5.5), a
recorded message is played, asking them to wait for other participants to be
connected (step s5.6).

If the caller's CLI does not correspond to an entry on the list (step s5.3), they are
refused access to the conference call (step s5.7) and the caller is not connected
thereto.

If the caller's CLI is not available (step s5.2), for example if the CLI has been
withheld by the caller, access to the conference call is refused (step s5.8). A further
text message may then be sent to all the mobile telephones 3a-3d identified on the
list who have yet to join the conference reminding them that their CLI should not
be withheld (step s5.9). A user receiving this message may then enable the CLI
feature on their mobile telephone before dialling, or re-dialling, the conference call
number.

The connection procedure is then complete (step s5.10).

An example of a suitable conference call server 1 is shown schematically in Figure 6.
The conference call server 1 comprises an input interface 11 for receiving data from
an external source and an output interface 12. A processor 13 monitors and
controls operations. A memory facility 14 is provided for storing application
software and, optionally, a database relating to the conference call channels and
virtual telephone numbers provided by the conference call facility. An access

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processor 15 determines whether to allow the caller access to a conference call, by
determining whether the conference is full as in the procedure of Figure 4 or by
extracting CLI information from incoming calls and using this information
according to the procedure of Figure 5. Requests 4 are forwarded to a request
5   handler 16, which compiles the list of conference participants, if required, and
reserves the conference call channel and virtual telephone number. A message
generator 17 prepares and sends confirmation and invitation messages 9, 10a-10c.
A data bus 18 provides a communication path between these components 11-17.
The conference call server 1 may be implemented on a conventional server
10 apparatus.

A suitable mobile telephone 3a is shown schematically in Figure 7. The mobile
telephone comprises an antenna 19, a transceiver 20, a receiver 21 and a controller
22. A user interface 23 comprises a keypad 24 and a display 25. A microphone 26
15 and speaker 27 are provided, together with associated amplifiers 28, 29. The mobile
telephone 3a also includes other conventional features of mobile telephone
handsets, but these are omitted from Figure 7 for the sake of clarity.

The confirmation message 9 and invitation messages 10a-10c may be identical and
20 may not require separate generation processes. Alternatively, different invitation
messages 10a-10c may be sent to the conference participants. In a further
embodiment of the invention, the user requesting the conference call may not
receive a confirmation message 9, but instead be dialled directly by the conference
call server 1. The confirmation 9 and/ or invitation messages 10a-10c as well as the
25 request 4 may not be SMS messages and may take another form of text message,
such as multimedia messages (MMSs), e-mails or instant messages. Alternatively,
the confirmation 9 and/ or invitation messages 10a-10c may take the form of a
voice message. The request may alternatively be made through a website. For
example, a website associated with the conference call server 1, or even running in
30 the same server apparatus, could allow entry of data in a number of separate fields.
Such fields could be: the name of the call organiser, the mobile telephone number
of the call organiser, a description (for example the subject of the proposed
conference call), and a number of fields for the telephone numbers of the invitees.

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Once these fields are filled-in and an "OK" button selected, the data is sent as a
request message to the computer hosting the website, and from there onto the
conference call server 1 if this is located in separate apparatus.

5   The communication terminals may be identified by, for example, an IP address, an
     MSISDN or other identification instead of, or as well as, telephone numbers and
     CLIs. The communication terminals may also be identified as a group, for example
     using a group IP address or a group of telephone numbers defined in a user's
     communication terminal 3a. In one example, a user can predetermine a group and
10   store the telephone numbers of the members of the group on the conference call
     server 1 together with an identifier, e.g. "sales team". The members of the group
     may then be invited to join a conference call by the sending of a request including
     the identifier, which is then understood by the conference call server 1 to require a
     conference call including all the members of the group.

15

     In one embodiment, MMS is used for the request. Here, the MMS request
     comprises a number of parts, namely text (comprising at least the telephone
     numbers of the proposed recipients), an audio clip and an image. The image can
     relate to the user of the terminal 3a setting up the conference call, and can for
20   example be a photograph of the user. Modern mobile telephones often include
     digital cameras, so this can be relatively easy to achieve. Aswell as or instead of a
     still image, the request may include a video clip. The audio clip and/or any video
     clip can be pre-recorded, or can be recorded immediately before creation of the
     MMS request.

25

     The conference call server 1 acts on the MMS request similarly to the SMS request
     of the embodiment described above. In particular, the conference call server
     extracts the telephone numbers of the participants to be invited. The conference
     call server 1 then generates invitation messages inviting the remaining participants
30   to join the conference call. Headers of these invitation MMSs are generated such
     that the field indicating the source of the message contains the telephone number of
     the conference call channel. The body of each invitation MMS comprises a text
     section including the telephone number of the conference call channel, text

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indicating that the message is an invitation to join a conference call and any other
text extracted from the request MMS. The body also includes the image and the
audio clip included in the request MMS. The invitation MMSs are then sent to the
mobile telephones 3b-3d, as with the messages 10a-10c in Figure 1.

5   This allows additional prompts to be delivered to invitees to the conference call.
The image might remind the invitee who the call initiator is. The audio clip may be
able to include more information, for example about the subject and content of the
proposed conference call, than could be included in an SMS because of the length
limitations associated with SMSs. Additionally, this can be more convenient, since

10   it is usually easier and quicker to record a message than to type it using a keypad of
a mobile telephone.

The confirmation message 9 need not be an MMS, and could be an SMS or other
type of message. The server 1 may have to distinguish between different mobile

15   telephone types, and send MMSs to those capable of handling MMSs and send SMSs
to the other telephones.

This embodiment can be envisaged as an extended version of the method shown in
Figure 3. Here, steps s3.6 and S3.7 also include attaching an audio clip and/or an

20   image to the MMS request. Steps s3.11 and S3.12 also include attaching any audio
clip and image to the invitation MMS. Of course, it may not be necessary to include
both an audio clip and an image in a request MMS or an invitation MMS, and MMS
handling applications in mobile telephones do not usually require both to be
included.

25

In a further embodiment, the conference call server 1 sends a different type of
invitation message to the participants to the call. Briefly, the conference call server
1 sends invitation messages which comprise a notification of a conference call, and
indicate when the call is to take place. The invitation messages do not necessarily

30   need to include an identifier by which the conference call number can be dialled,
since the conference call server 1 calls all the participants at the scheduled time.
This allows increased certainty that participants to the call will be joined, since it
· eliminates the possibility of delay in the delivery of invitation messages having the

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result of preventing an invitee receiving the invitation message at a suitable time. Also, it is more difficult for an invitee to ignore an incoming call than it is to ignore an SMS, MMS, e-mail or the like.

5   This embodiment will now be described with reference to Figure 8.   A communication system is shown in Figure 8, comprising a conference call server 29 and a network 30, which includes all the usual components of a mobile telephone network, none of which are shown.

10   The conference call server 29 provides communication channels for conference calls between a plurality of communication terminals, which in this example are mobile telephones 31 and 32a-32c. The conference call server 29 is arranged such that it is perceived by the network 2 as a self-contained mobile network with a single Global Title and Point Code.

15

A user of the communication terminal 31 wishing to set up a conference call makes a request 33 using an SMS, MMS or other message. The request 33 contains a list of the telephone numbers of other participants to be invited to take part in the conference call, or alternatively a group identifier, and optionally additional text,

20   image(s) and/or audio. The request also identifies the time at which the conference call is to take place. This may be either through the specifying of a time (and optionally a date) or alternatively through the specifying of period before the call is to commence. The header of the request 33 includes a field identifying the telephone number of the sender 31.

25

The request 33 is addressed to a telephone number that has previously been allocated for allowing access to the conference call facility. The request 33 is forwarded to the conference call server 29 by the network 30.

30   The request is handled substantially as shown in and described with reference to Figure 3, except that it is not necessary to include in a confirmation 34 or in invitation messages 35a to 35c any virtual telephone number assigned to the

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conference call. The conference call server 29 also determines the time at which the conference call is to take place, by calculating when any period expires if necessary.

The confirmation and invitation messages 34, 35a-35c prepared by the server 29
5   indicate the time when the conference call is to commence. The confirmation and invitation messages 34, 35a-35c are sent directly from the conference call server 29 to the mobile telephones 31, 32a-32c.

If the confirmation and invitation messages 34, 35a-35c are sent some time before
10   the conference call is to take place, reminder messages (also indicated at 34 and 35a-35c) are sent at one or more suitable times between the sending of the confirmation and invitation messages and the time of the conference call. For example, the conference call server 29 can be arranged to send separate reminder messages 34, 35a-35c at two hours, one hour and ten minutes before the conference call time.
15   These reminder messages 34, 35a-35c may be the same as the confirmation and invitation messages 34, 35a-35c, although preferably they indicate that they are reminder or subsequent messages, to minimise the chances that a recipient could think the message relates to a different conference call.

20   One or more of the messages 34, 35a-35c sent to each of the mobile telephones 31 and 32a-32c includes the virtual telephone number allocated to the conference call as the originator of the message. This ensures that each of the intended participants in the conference call has knowledge of the telephone number which needs to be dialled to access the call should they become cut-off, or should they not be
25   accessible or available when the conference call commences. Advantageously, only the last message 34, 35a-35c sent to each of the mobile telephones 31 and 32a-32c includes the access telephone number of the conference call. This provides a more secure solution than one in which the conference call access telephone number is made available to the participants in the conference call earlier, since it results in a
30   shorter period of time in which an unauthorised person could illegitimately obtain the conference call access telephone number and attempt to access the conference call covertly. However, the conference call access telephone number can be sent to

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the mobile telephones 31 and 32a-32c in one or more earlier messages 34, 35a-35c if such levels of security are not required.

If any of the messages are not delivered successfully, the conference call server 29 may make further attempts to send the messages for a limited period.

At the allotted time, the conference call server 29 dials the telephone numbers of all the participants to the call, including the invitees 32a-32c and the initiator 31, and joins all the calls together, thereby completing the creation of the conference call. Here, it is unnecessary to check that those attempting to access a conference call are authorised.

If any participant is unavailable when the conference call server 29 dials the participants to the call (for example because there is insufficient signal strength to maintain a network connection), they can access the call by using the call number facility on their mobile telephone 31 and 32a-32c from the last-received SMS or other invitation message 34, 35a-35c which was received. In this case, the conference call server 29 examines the CLI of any person dialling into the conference call and ensures that they are legitimate before allowing access.

The conference call server 29 can be the same as that shown in Figure 6, except that the access processor 15 is supplemented with a participant dialler, or initiator, which dials the invitees 32a-32c and the initiator 31 at the allotted time. The conference call server 29 may be implemented on a conventional server apparatus.

The conference call server 29 may additionally be provided with means for deducting a charge for the calls to the participants from a pre-paid account, or for billing the charge to a suitable entity.

In another embodiment, the conference call servers 1 and 29 are combined into a single server. Here, conference calls can be dealt with as in the Figure 1 embodiment or in the Figure 8 embodiment in dependence on the telephone number which was used to access the service, i.e. the telephone number to which

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the request 4 or 33 was addressed. Furthermore, a different access number can be allocated for conference calls relating to different individuals or organisations, providing a tool useful for billing and other account related purposes.

5   The embodiments described are merely examples showing how the invention may be implemented. The invention is not limited to use with mobile telephones and mobile telephone networks and may be used to provide conference call services to other types of communication terminals, such as so-called landline or wired telephones, personal computers and any other device equipped with voice

10   communication facilities.

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Claims

1.   A method of establishing a conference call, comprising:
      receiving a request at a conference call service provider from a first
5   communication terminal, the request comprising one or more identifiers relating to
a plurality of other communication terminals; and
      in response to the request, allocating a conference call channel, associating
an identifier with the conference call channel and sending a message from the
conference call service provider to said other communication terminals, each
10   message containing the conference call channel identifier as the message originator.

      2.   A method according to claim 1, comprising subsequently initiating
from the conference call service provider a telephone call to each of said other
communication terminals.

15
      3.   A method as claimed in claim 2, wherein the request identifies a time at
which the conference call is to be started, and the initiating step occurs at
substantially the conference call start time.

20   4.   A method according to any preceding claim, wherein a message containing
the identifier associated with the conference call channel is sent to the first
communication terminal in response to the request.

      5.   A method according to any preceding claim, wherein the request is a short
25   text message or a multimedia message.

      6.   A method according to any preceding claim, wherein each message sent by
the conference call service provider to said other communication terminals is a
short text message or a multimedia message.

30
      7.   A method according to claim 6, wherein a body of the short text or
multimedia message includes the identifier associated with the conference call
channel.

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8.   A method according to claim 6 or 7, wherein the short text or multimedia message further includes additional text, image and/or audio data forming part of the request.

5

9.   A method according to any preceding claim, wherein the identifiers relating to the communication terminals are telephone numbers.

10.   A method according to any preceding claim, wherein the conference call
10   channel identifier is a Calling Line Identification associated with the conference call channel.

11.   11.   A method according to any preceding claim, further comprising:
        comparing an identifier associated with a communication terminal
15   determined to be attempting to access the conference call channel with a list of identifiers relating to communication terminals allowed to access the conference call channel; and
        allowing access to the conference call only if the identifier associated with said communication terminal corresponds to an identifier on said list.

20

12.   A method according to claim 11, further comprising, in response to a determination that an identifier associated with a communication terminal attempting to access the conference call channel is withheld or is otherwise non-determinable, a further message is sent to all communication terminals identified in
25   the request that are not connected to the conference call channel.

13.   Apparatus for providing a conference call facility comprising:
        a receiver for receiving a request from a first communication terminal, said request containing one or more identifiers relating to a plurality of other
30   communication terminals;
        an allocator for allocating a conference call channel and associating an identifier with the conference call channel in response to the request; and

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a message generator for preparing and sending a message to said other communication terminals, each message containing an indication that the message originates from the conference call channel.

5   14.   Apparatus according to claim 13, wherein the indication is a Calling Line Identification associated with the conference call channel.

15.   Apparatus according to claim 13 or claim 14, further comprising an access restrictor configured to:

10   compare an identifier associated with a communication terminal determined to be attempting to access the conference call channel with a list of identifiers relating to communication terminals allowed to access the channel; and

        allow access to the conference call only if the identifier associated with said communication terminal corresponds to an identifier on said list.

15

16.   Apparatus according to claim 15, wherein the access restrictor is configured so that, in response to a determination that an identifier associated with a communication terminal attempting to access the conference call channel is withheld or is otherwise non-determinable, a further message is sent to all

20   communication terminals identified in the request that are not connected to the conference call channel.

17.   Apparatus according to any of claims 13 to 16, further comprising:

    an initiator arranged to initiate a telephone call to each of said other

25   communication terminals.

18.   Apparatus as claimed in claim 17, wherein the request identifies a time at which the conference call is to be started, and the initiator is arranged to initiate the telephone calls at substantially the conference call start time.

30

19.   Apparatus according to any of claims 13 to 18, wherein the message generator is configured to send a message containing the identifier associated with

- 20 -

the conference call channel to the first communication terminal in response to the request.

20.   Apparatus according to any of claims 13 to 19, wherein the receiver is a
short text or multimedia message receiver.

21.   Apparatus according to any of claims 13 to 20, wherein each message is a
short text message or a multimedia message.

22.   Apparatus according to claim 13 and claim 21, wherein the message
generator is configured to include the conference call channel identifier in a body of
each short text message or a multimedia message.

23.   Apparatus according to any of claims 13 to 22, wherein the message
generator is configured to include additional text, image and/or audio data forming
part of the request in a body of the short text message or a multimedia message.

24.   Apparatus according to any one of claims 13 to 23, wherein the identifiers
relating to the communication terminals are telephone numbers.

25.   A method of restricting access to a conference call channel, comprising:
        compiling a list of identifiers associated with communication terminals to be
joined on a conference call;
        determining whether an identifier associated with a first communication
terminal attempting to access the conference call channel corresponds to an
identifier on the list;
        allowing access to the conference call channel if the identifier of the first
communication terminal corresponds to an identifier on said list; and
        disallowing access to the conference call channel if the identifier of the first
communication terminal does not correspond to any of the identifiers on the list
wherein, if the identifier of the first communication terminal is withheld or is
otherwise non-determinable, a message is sent to all communication terminals

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associated with identifiers on said list that have not accessed the conference call
channel.

26.   Apparatus for restricting access to a conference call channel, comprising:

5   a compiler configured to compile a list of identifiers associated with
communication terminals to be joined on a conference call;

         a determiner configured to determine whether an identifier of a first
communication terminal attempting to access the conference call channel
corresponds to an identifier on the list;

10   an access grantor configured to allow access to a conference call channel if the
identifier of the first communication terminal corresponds to an identifier on said
list and to disallow access to the conference call channel if the identifier of the first
communication terminal does not correspond to any of the identifiers on the list;
and

15   a message generator configured to prepare and send a message to all
communication terminals associated with identifiers on the list that are not
connected to the conference channel if the identifier of the first communication
terminal has been withheld or is otherwise non-determinable.

20   26.   A communication system comprising a communication network, a plurality
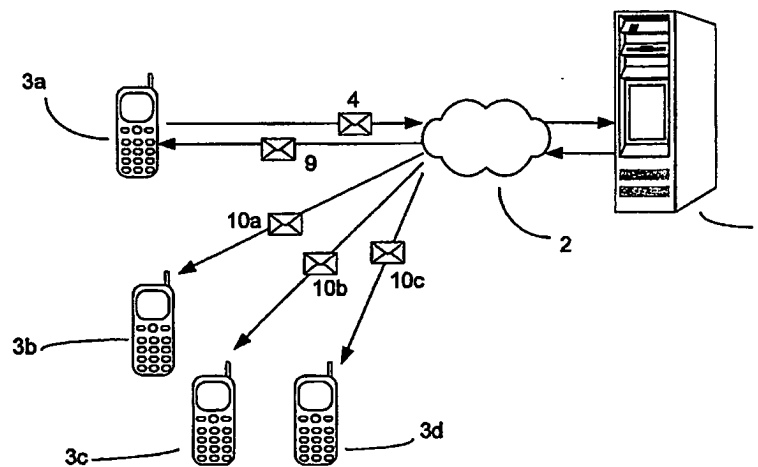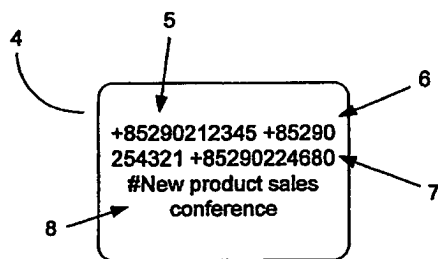of communication terminals and apparatus according to any one of claims 13 to 24
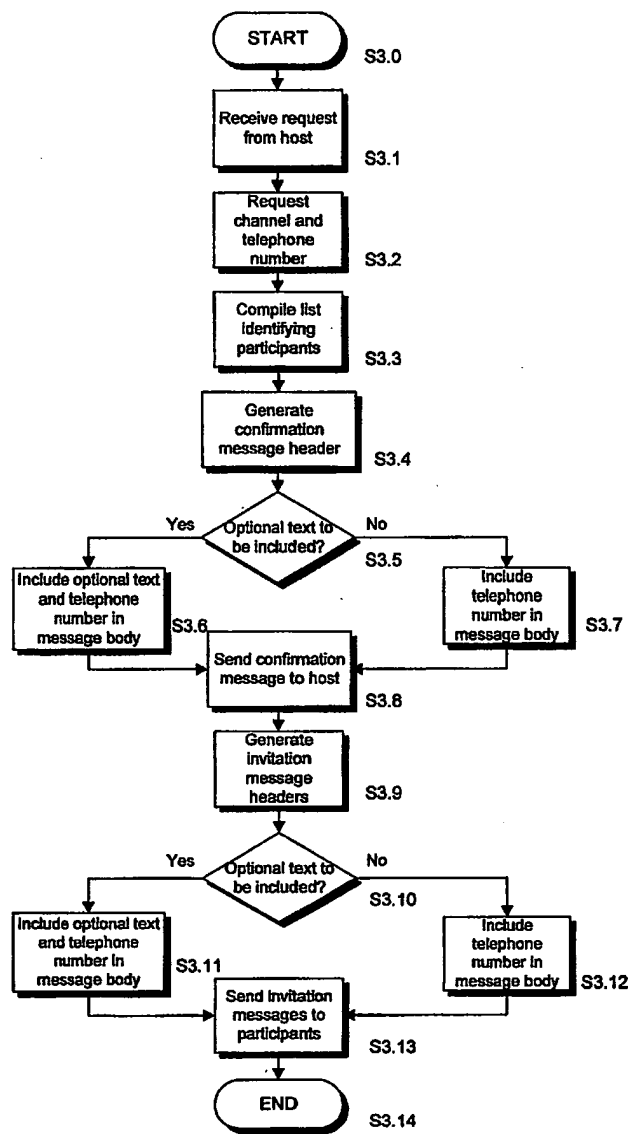and 26.

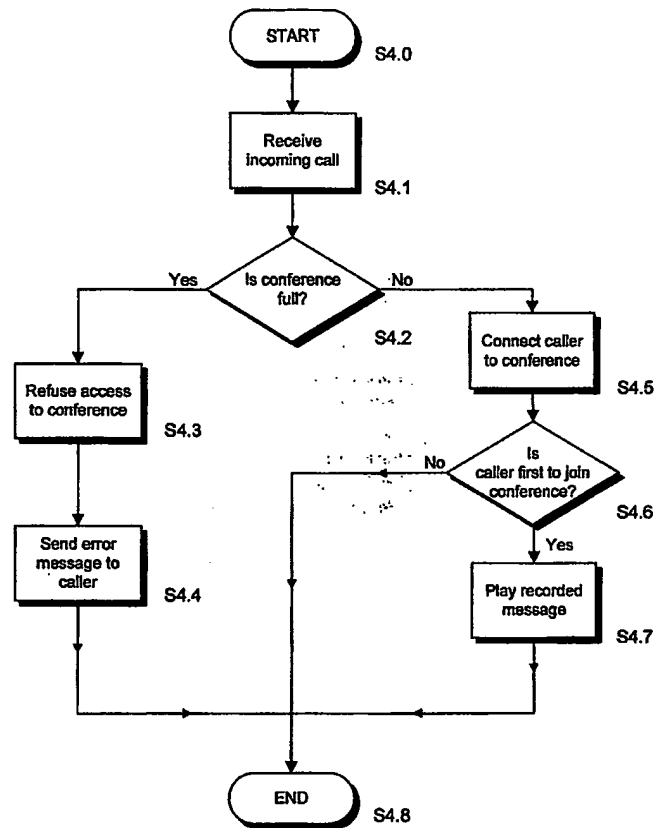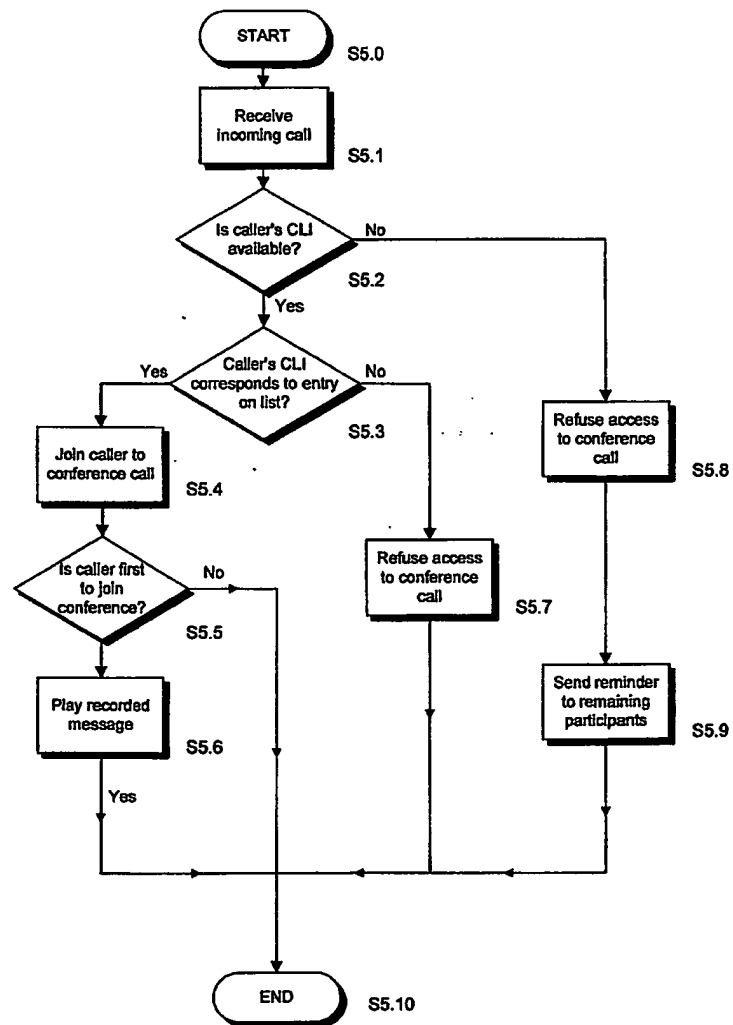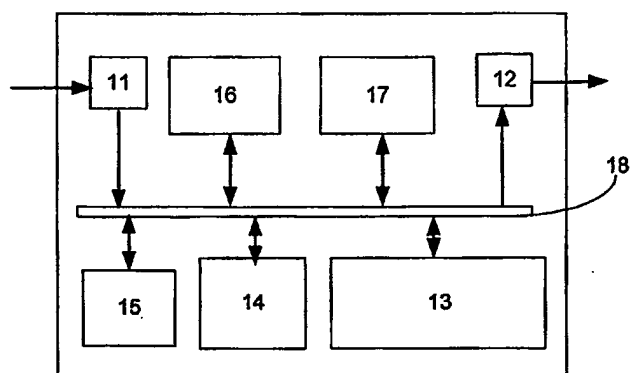Figure 1

Figure 2

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Figure 3

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Figure 4

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Figure 5

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Figure 6

Figure 7

Figure 8